Safety Advisory Committee
January 8, 2016
1:30 – 3:00 PM

Minutes

Committee Member	Representing	Present
V. Potapenko, M. O. Leimer, J. Willen	Human Resources Advisors	
Blodgett, Paul M.	Environment, Health and Safety Division	
Bluhm, Hendrik	Chemical Sciences Division	
Broughton, Jeff	Computing Sciences Directorate	X
Chernowski, John	Facilities Division	X
Christensen, John N.	Earth Sciences Division	X
Dickerhoff, Darryl	Energy Technologies Area	X
Franaszek, Stephen	Genomics Division	
Greiner, Leo	Nuclear Science Division	
Haber, Carl	Physics Division	
Martin, Michael C.	Advanced Light Source Division	X
MacGowan, Betsy	Information Technology Division	X
Ravani, Shraddha	Life Sciences Division	
Sauter, Nicholas	Physical Biosciences Division	
Schmid, Andreas	Materials Sciences Division	X
Seidl, Peter	Accelerator Technology and Applied Physics Division; SAC Chair	X
Thomas, Patricia M.	Safety Advisory Committee Secretary	X
von der Lippe, Henrik	Engineering Division	X

Others Present: Pedro Estacio, Mike Kritscher, Todd LaBerge, Quang Le, Bob Mueller, Martin Neitzel, Marcia Ocon Leimer, Andrew Peterson, Tonya Petty, Scott Robinson, Jack Salazar, Mark Scott, Scott Taylor, Greta Toncheva, Aaron Ward, Tammy Welcome, Bill Wells, Jennifer Willen, Ian Sharp

Comments from the Chair – Peter Seidl

SAC Charter – Jim Floyd reviewed the charter. It will be going to Glenn Kubiak, Paul Alivisatos, and the Committee members for approval.

Peer Review – We are hoping to complete the Chemical Sciences Peer Review within the next month.

EHS Pipeline – Bill Wells

Revision Type	Documents	Program/Policy	Significance	Status
Aviation Safety Policy -- New	RPM	Aviation	D	Complete. Posted 12/15/2014
Confined Spaces Program -- Major Revision	ESH Manual	Confined Spaces	TBD	Editing complete. Changes reflect current practice. SME works closely with users.
Fall Protection Program Major Revision	ESH Manual	Fall Protection Program	C	Editing complete. Changes reflect current practice. SME works closely with users.
Pressure Safety – major revision	RPM, ESH Manual	Pressure Safety	C	Major revision; final input from stakeholders, to be presented to SAC in Feb 2016.
ORPS & NTS Reporting Quick Guide	RPM	ES&H – Occurrence Rep.; RPM-PAAA Compliance	D	In final OCA Management Review
Laser Safety Program -- Major Revision	ESH Manual	Laser Safety Program	C	LSC Review complete. CS polish in progress prior to posting.
Elevated Work Surfaces -- Major Revision	ESH Manual	Elevated Work Surfaces Program	C	Editing complete. Changes reflect current practice. SME working closely with users.
Delete requirement for Receiving to obtain MSDS/SDS– Minor Revision	RPM	Receiving Policy	E	Draft final, concurrence in progress

Revision Type	Documents	Program/Policy	Significance	Status
Roof Access – New Chapter	EHS Manual	Roof Access	TBD	SME Assigned, in queue for development
Traffic & Pedestrian Safety -- Revision	EHS Manual	Traffic & Pedestrian Safety	TBD	Interim SME assigned. In queue for development.
NFPA 45 Integration into Chem Hygiene and other EHS Manual chapters	EHS Manual	Chem Hygiene, Compressed Gasses, Ventilation, Fire Prevention and others	TBD	Integration plan in development

- **NFPA 45 –** A cross walk between NFPA-45 requirements and LBNL requirements was completed; about 60% of NFPA-45 requirements are covered. An integration plan is in development. LBNL plans to have all the requirements in place before mid-summer. Some of the issues are difficult and need to be discussed with the research community and BSO. Issues include design and inspection of fume hoods, Bunsen burner hot work permits, ventilation, etc.

Laser Safety – Greta Toncheva

The revised EHS Manual Chapter 16 is with the editors, to be published soon. It reflects the transition to Work Planning and Control and LBNL's adoption of the ANSI Z136.a – 2014 standard. The changes are being communicated to laser users in their newsletter. There are no significant changes to laser use practices.

The format of entryway hazard signs for laser labs, including the proper use of "danger/warning/caution" according to hazard level, will be updated over a year at Activity renewals.

Optical Density requirements for laser eyewear will be re-calculated at Activity renewals. It is expected that most existing goggles will meet the requirements – a few labs using YAG lasers in the near infrared spectrum may be affected.

Other changes include interlock test and audit frequencies, temporary work authorization duration, training for service technicians, a recommended registration form for collecting data about new lasers, an on-line fiberoptics refresher training course, description of Laser Safety Officer training and duties, and removal of the requirement for posting non-beam hazards from the Laser Safety chapter. (Some non-beam hazards may require posting under other EHS Manual / Chem Hygiene Manual requirements.) There are new requirements for obtaining permits for outdoor laser use, and for measuring output power for lab-built lasers.

The EHS0302 Laser Safety training will be updated to adopt a uniform training course being developed in conjunction with other National Laboratories. The baseline eye exam will be required for persons operating a laser at LBNL for more than 60 days.

For further information, see the Laser Safety website at:
http://www2.lbl.gov/ehs/safety/lasers/index.shtml

Fire Safety – Todd LaBerge

Todd LaBerge is now the official (no longer "acting") Fire Marshall for Berkeley Lab. Todd and his staff want to encourage people to ask questions about fire prevention.

There has been a lot of concern and discussion about changes to EHS Manual Chapter 12, Work Process F, Hot Work Permits. The goal is to make the hot work permit process less burdensome, and to prevent unnecessary activation of fire alarms. The basic rule of thumb is if you are planning to do some work that could activate a fire alarm system, discuss your plans with the Fire Department and, if required, apply for a hot work permit at least 24 hours in advance, by contacting hotwork@lbl.gov Establishment of dedicated hot work areas is encouraged in buildings where hot work is regularly performed.

Obtaining a hot work permit can save a lot of unproductive time for building occupants who have to evacuate and firefighters who have to respond to a false alarm. For example, Building 88 had to evacuate recently when smoke from bolt grinding set off the alarm system.

Fire hazard assessments were completed in 45 buildings in 2015. Common issues include space heaters, daisy chained electrical cords, and improper chemical storage. The Fire Department visits help spread the fire prevention message through direct involvement and collaboration with building occupants. We also want to improve incident management and notification by encouraging people to pull the fire alarm box or call 911 from a safe location immediately when a fire or health incident is detected. Fires and medical emergencies can escalate rapidly, so it is important to ensure help is on the way.

Recent incidents of interest have included:

- The Bldg. 88 evacuation for hot work (described above);
- The Bldg. 70 fume hood pressure vessel explosion (described in previous SAC meeting);
- The Bldg. 70A fire from a radio/tape recorder, which occurred almost a year ago, and the lab where it started is still out of operation;
- The 71Q restroom trailer HVAC system fire.

In Case of Crisis – Pedro Estacio and Tonya Petty

Health Services and Emergency Management have been working together to develop a new software application, In Case of Crisis, that contains all the information that is currently in the Emergency Guide flip charts, plus additional information. It will be available soon for Beta testing, then downloadable for use on smart phones, tablets, laptops, or desktop computers. The data will be stored on the phone or device. The electronic information will be easier to update than the paper flip charts. The application is already being used on the UC Berkeley campus. The information is LBNL-wide and is not customized for particular facilities, buildings, or Divisions at this time.

The Emergency Guide flip charts have also been updated. There will be an LBNL site map on the back.

Building Emergency Plans will be available on a web page and in a Google folder. In 2017, there are plans to offer building-specific emergency response training.

Grounding Hook Policy – Bob Mueller

There are over 100 grounding hooks in use at LBNL. Grounding hooks are used for de-energizing research and development systems, lockout/tagout verification, prevention of unintended re-energization, and prevention of capillary discharge. There is no consensus document or DOE standard for grounding hooks. LBNL Facilities grounding systems are well-established. The Electrical Safety Committee identified a need to establish requirements for grounding hooks for LBNL research equipment. Will Waldron chaired the committee to develop the policy, which is near completion. They looked at related standards [ASTM F711, ASTM F855, IEEE Standard 510-1983, and OSHA 29 CFR 1910.269(j)]. The policy will be integrated into an Engineering Standard (located in the Engineering Division Process Guide) and Work Practices in the LBNL Electrical Safety Manual. A risk-based approach was used to determine the requirements.

- A ground hook system places a grounded conductor at the end of the rod between the operator and the electrical hazard. The low impedance ground hook system is not considered a live line tool.
- High Z ground hooks may have a voltage potential at the end of the rod and will be held to a stricter standard than low Z ground hooks.

Some of the key elements of the proposed requirements include:

- Before use of ground hooks, LOTO shall be applied. A LOTO procedure shall be written for every ground hook application.
- Only LBNL Qualified Electrical Workers (QEWs) shall apply ground hooks.
- The condition of ground hooks will be checked before each use.

- Ground hooks will be required to be inspected by a QEW every two years. Low-Z ground hooks will require a resistance test. High-Z ground hooks will require voltage testing.
- Insulated rods used to manipulate equipment within a high-voltage enclosure will also be required to be inspected.

The draft policy has been sent to the DOE EFCOG electrical subcommittee for feedback.

Electrical Safety Update – Mark Scott

Mark Scott, Jim Floyd, and Henrik von der Lippe have been meeting with Division Line Management to discuss concerns about electrical safety and rolling up the results to the Lab Director.

EHS is making good progress in rolling out the new electrical safety training. The QEW2 classroom training was offered for LBNL employees in December 2015. The Practical portion of the training is starting. Training for construction subcontractors will be next, to be completed in March 2016. The plan is to start offering QEW1 training by the end of January 2016.

EHS Manual Chapter 8, Section 5 for non-QEWs will be revised by March 2016. There will be training for electrical switching and for stand-by persons.

There will also be some changes to the LOTO program. There will be reduced training requirements for Responsible Individuals. Operations requiring multiple crews or shift changes will not automatically require complex LOTO procedures (unless there are other factors that make them complex systems). This change is based on an unexpected interpretation of the NFPA-70E standard from the NFPA Committee.

There will be a QEW support shop in Building 58 with shop hours for people who need assistance.

Bob Mueller has served the Lab for many years as the Chair of the Electrical Safety Committee and is ready to step down. Henrik von der Lippe expects to announce a new committee chair by February.

The meeting was adjourned at 2:45 PM
Respectfully submitted, Patricia M. Thomas, SAC Secretary